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Increasing Barcode Medication Administration (BCMA) To Improve Patient Safety

Maria C. Perez-Arias, Pharm D.

Background

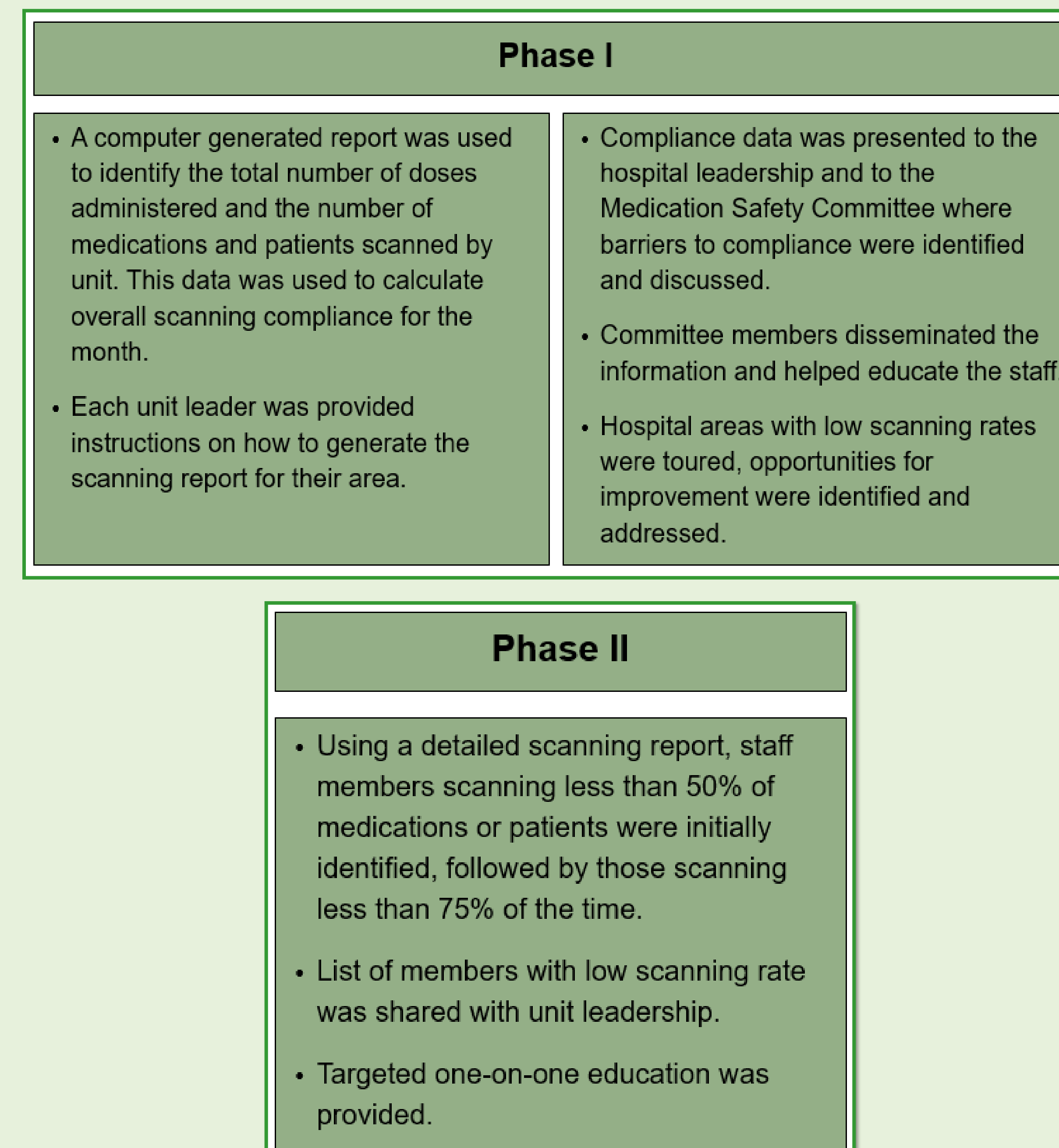
- Medication errors frequently have catastrophic consequences for the patients, and place enormous financial burden on our health care system.
- The Institute of Medicine Report, “To Err is Human” published in 1999, estimated that medication errors account for more than 7,000 deaths annually, and many of them are preventable.
- Errors may happen at different stages of the medication use process, but most commonly take place at the point of administration.
- Barcode medication administration (BCMA) technology requires the nurse to scan the patient’s wrist band, to ascertain the correct patient, and the medication barcode, to verify the right medication, dose, route and time, which are recognized as the “Five Rights” of medication administration.
- BCMA implementation has demonstrated to significantly reduce errors at the point of administration.
- The Leapfrog Group, a national organization and coalition of public and private purchasers of employee health coverage, has developed a national standard for BCMA which requires to have both, patient and medication scans in 95% of medication administrations in units where this technology has been implemented.

Purpose

- The purpose of this Performance Improvement project was to increase the rate of patient and medication scanning to meet the Leapfrog standard.

Methods

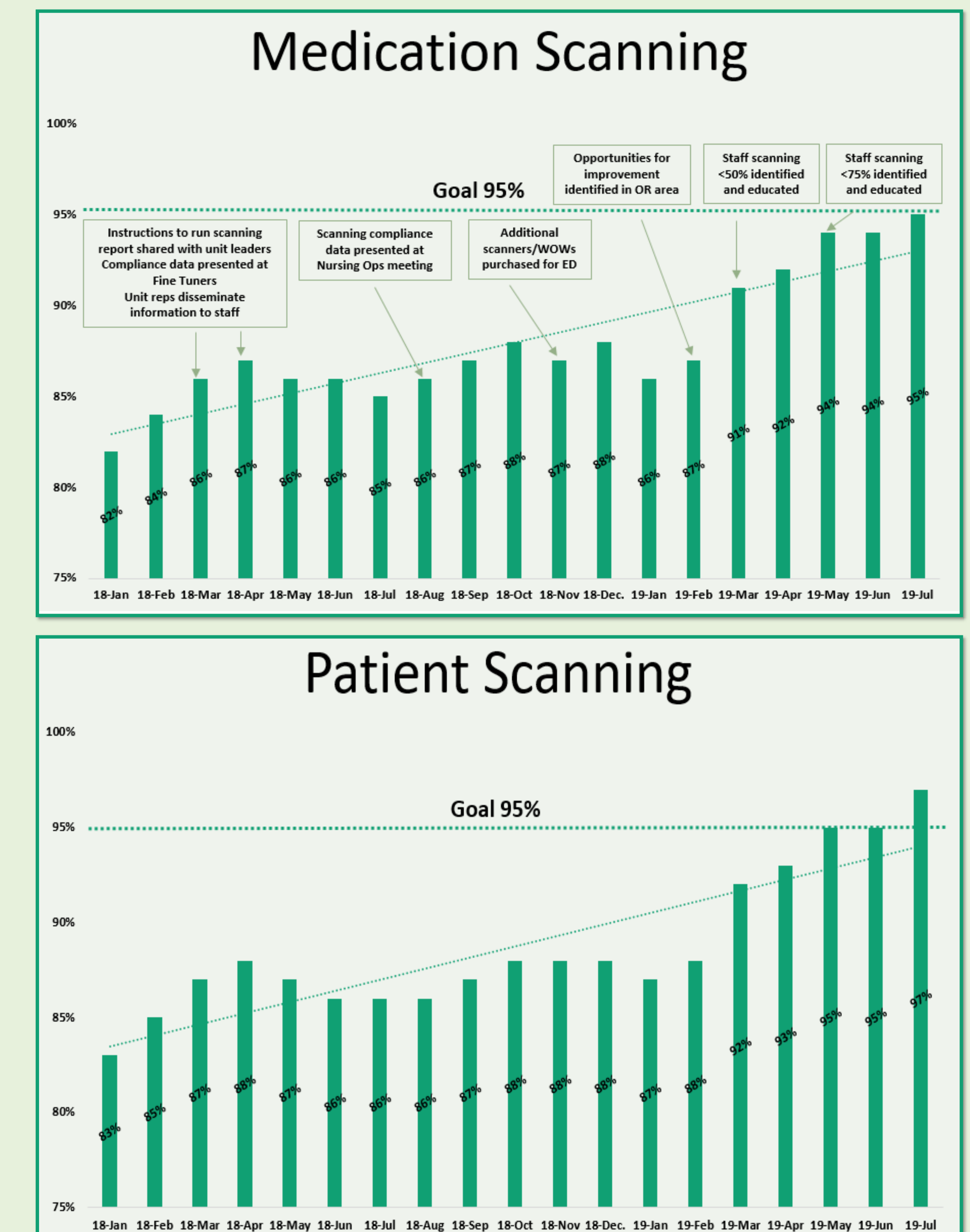
- A review of medication and patient scanning compliance was conducted from January 2018 to July 2019.



Results

- During Phase I of the project, medication and patient scanning increased from 82% to 87%, and from 83% to 88% respectively. Phase II, which included identification and targeted one-on-one staff education, raised medication scanning to 95% and patient scanning to 97%.
- For the duration of the study, a total of 1,220,650 medications doses were administered. Overall, medication scanning compliance increased from 82% to 95%, while patient scanning compliance increased from 83% to 97%. This resulted in 16% improvement in medication scanning, 17% improvement in patient scanning, and 195,304 additional doses scanned.
- Barriers to scanning identified included insufficient number of scanners in the Emergency Department and medication barcodes not scanning properly.

Results



Conclusion

- Barcode medication scanning has shown to reduce medication errors at the point of administration. Interventions such as raising awareness of the importance of this measure, securing leadership support, targeted individual staff education, and identifying and addressing barriers to scanning, are tools that can be successfully implemented to increase compliance.

References

- Factsheet: Bar Code Medication Administration. Available at www.leapfroggroup.org/survey. Accessed 06.2019.
- Hook J, Pearlstein J, Samarth A, Cusack C. Using Barcode Medication Administration to Improve Quality and Safety: Findings from the AHRQ Health IT Portfolio (Prepared by the AHRQ National Resource Center for Health IT under Contract No.290-04-0016). AHRQ Publication No.09-0023-EF. Rockville, MD: Agency for Healthcare Research and Quality. December 2008.
- Kohn LT, Corrigan JM, Donaldson MS, editors. To err is human: building a safer health system . Washington, DC: National Academy Press, Institute of Medicine; 1999.
- Morris FH, Abamowitz PW, Nelson SP et al. Effectiveness of a Barcode Medication Administration System in Reducing Preventable Adverse Drug Events in a Neonatal Intensive Care Unit: A Prospective Cohort Study. J Pediatr 20019;154:363-8.
- Pathways for Medication Safety- Leading A Strategic Planning Effort. Available at www.medpathways.info. Accessed 06.2019.
- Poon EG, Keohane CA, Yoon CS et al. Effect of Bar-Code Technology on the Safety of Medication Administration. N Engl J Med 2010;362:1698-1707.
- Seibert HH, Maddox RR, Flynn EA, Williams CK. Effect of barcode technology with electronic medication administration record on medication accuracy rates. Am J Health-Syst Pharm. 2014;71L 209 – 218.